

ABSTRACT OF DISCLOSURE

A sensorless speed control apparatus and method for a brushless dc (BLDC) motor. A speed detection unit detects fluxes of respective phases of the BLDC motor, measures a period of the detected flux changes, and determines a speed of the BLDC motor. A subtractor subtracts an inputted reference speed and the detected speed outputted from the speed detection unit, and outputs an error speed. A speed controller outputs a reference current corresponding to the error speed outputted from the subtractor. A current controller outputs a control signal for controlling the switching operations of an inverter based on the reference current outputted from the speed controller. The inverter applies a current of variable frequency to the respective phases of the motor based on the control signal outputted from the current controller, and drives the motor.